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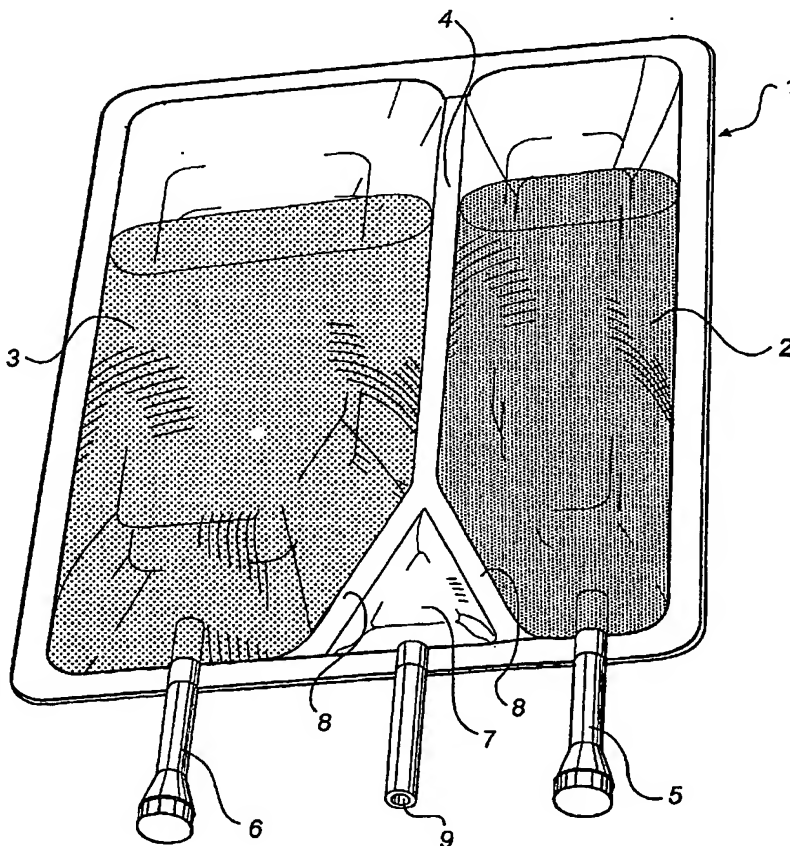
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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,

[Continued on next page]

(54) Title: CONTAINER WITH ACID DIFFUSION BARRIER AND USE THEREOF



(57) Abstract: The invention relates to a container having a wall structure comprising a polymer material including an acid diffusion barrier. The invention also relates to a use of a cycloolefin polymer, COP, and/or a cycloolefin copolymer, COC, as an acid diffusion barrier polymer in a container for an acid. The invention further relates to a use of such a container and to a system for providing a medical solution comprising at least one container according to the invention. Finally the invention relates to a method for treatment by means of a container according to the invention.

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LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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(15) **Information about Correction:**

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/SE 2003/001730

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: A61J 1/10, B65D 85/84, B65D 81/24, B65D 65/40, B32B 27/32  
According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: B65D, B32B, A61J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE WPI Week 200038 Derwent Publications Ltd., London, GB; Class A18, AN 2000-436422 &amp; JP 2000154238 A (NIPPON ZEON KK), 06 June 2000 (2000-06-06) abstract</p> <p>---</p>	1-7,20
X	<p>DATABASE WPI Week 199544 Derwent Publications Ltd, London, GB; Class A17, AN 1995-339345 &amp; JP 7231928 A (MITSUI PETROCHEM IND CO LTD), 5 September 1995 (1995-09-05) abstract</p> <p>---</p>	1-9,20-25

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

12 April 2005

Date of mailing of the international patent search report

12 -04- 2005

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2003/001730

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE WPI Week 200218 Derwent Publications Ltd., London, GB; Class A17, AN 2002-135200 & JP 2001315276 A (MITSUI CHEM INC), 13 November 2001 (2001-11-13) abstract  --	1-15,20-25
X	DE 19916141 A1 (TICONA GMBH), 26 October 2000 (26.10.2000), page 7, line 50 - line 63; page 8, line 24 - line 30, abstract, claims  --	1-15,20-25
X	DE 19633641 A1 (HOECHST AG), 26 February 1998 (26.02.1998), abstract  --	1-9,21-22,25
X	EP 1121905 A2 (DENTSPLY INTERNATIONAL, INC.), 8 August 2001 (08.08.2001), column 6, line 16 - line 20, abstract, claims  --	1-9,20
X	DATABASE WPI Week 200023 Derwent Publications Ltd., London, GB; Class A17, AN 2000-264666 & JP 2000070331 A (TERUMO CORP), 7 March 2000 (2000-03-07) abstract  -- -----	16-19

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/SE 2003/001730

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 25  
because they relate to subject matter not required to be searched by this Authority, namely:  
**see next page**
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

**see separate sheet**

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

International application No.

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## Box II

Claim 25 relates to a method of treatment of the human or animal body by surgery or by therapy/a diagnostic method practised on the human or animal body/Rule 39.1(iv). Nevertheless, a search has been executed for this claim. The search has been based on the alleged effects of the compound/composition.

# INTERNATIONAL SEARCH REPORT

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## Box III

- I. Claims 1-4, 8-15, 20 and 21-25 in part: a container characterised by the polymer material in the wall structure
- II. Claims 5-7 and 21-25 in part: a container characterised by its acidic content
- III. Claims 16-19 and 21-25 in part: a container characterised by having two compartments

The claimed invention relates to a container having a wall structure comprising a polymer material that includes an acid diffusion barrier.

The single general concept of the present application is to use a cycloolefin polymer (COP) or a cycloolefin copolymer (COC) as an acid diffusion barrier material in a container aimed to store an acidic liquid.

However, this concept is known from the prior art since JP 2000154238 discloses a container for storing acidic or alkaline solutions, where the container is a blow moulded bottle made from a cycloolefin polymer.

Since the concept is known, it cannot be inventive. Hence, there is no single general inventive concept in the sense of Rule 13.1 PCT.

No other features can be distinguished which can be considered as same or corresponding special technical features in the sense of Rule 13.2 PCT.

Thus, the application lacks unity of invention.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

01/04/2005

International application No.

PCT/SE 2003/001730

DE	19916141	A1	26/10/2000	AU	4110700	A	14/11/2000
				CA	2369137	A	19/10/2000
				DE	19943545	A	15/03/2001
				DE	50008124	D	00/00/0000
				EP	1177096	A,B	06/02/2002
				JP	2002540997	T	03/12/2002
				WO	0061370	A	19/10/2000
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DE	19633641	A1	26/02/1998	CA	2264057	A	26/02/1998
				CN	1227575	A	01/09/1999
				DE	59708678	D	00/00/0000
				EP	0920465	A,B	09/06/1999
				JP	2000516646	T	12/12/2000
				WO	9807768	A	26/02/1998
<hr/>							
EP	1121905	A2	08/08/2001	JP	2001220308	A	14/08/2001
				US	6372816	B	16/04/2002
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